

## PATENT COOPERATION TREATY

## PCT

REC'D 15 MAY 2001

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## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 7408/JB	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/US00/03231	International filing date (day/month/year) 08/02/2000	Priority date (day/month/year) 08/02/1999
International Patent Classification (IPC) or national classification and IPC C11D3/30		
Applicant THE PROCTER & GAMBLE COMPANY et al.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.



2. This REPORT consists of a total of 5 sheets, including this cover sheet.

- ☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☒ Certain defects in the international application
- VIII ☒ Certain observations on the international application

Date of submission of the demand  17/07/2000	Date of completion of this report  11.05.2001
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized officer  Pfannenstein, H  Telephone No. +49 89 2399 8217 

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/US00/03231

## I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

**Description, pages:**

1-27 as originally filed

**Claims, No.:**

1-10 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written-sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

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*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

## V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

### 1. Statement

Novelty (N)	Yes:	Claims	1-10
	No:	Claims	
Inventive step (IS)	Yes:	Claims	
	No:	Claims	1-10
Industrial applicability (IA)	Yes:	Claims	1-10
	No:	Claims	

### 2. Citations and explanations see separate sheet

## VII. Certain defects in the international application

The following defects in the form or contents of the international application have been noted:  
see separate sheet

## VIII. Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:  
see separate sheet

**Re Item V**

- 1) WO-A-9828393 (examples, claims, pages 29,35-36) exemplifies liquid hand dishwashing compositions comprising amine oxide and or betaine, anionic surfactant and diamine. Claim 1 differs from WO in that in claim 1 there is additionally a defined glycol or a (PO)<sub>x</sub>(EO)<sub>y</sub>H.  
In WO (pages 29,35-36) polypropylene glycol as dispersing agent and diols as carriers are listed as optional ingredients. Thus a skilled person would arrive at a composition according to claim 1. If there is a selection invention, a surprising effect over WO has not been demonstrated by way of comparative tests. Thus the subject-matter of claims 1-10 is not inventive (Article 33(3) PCT).

WO-A-9612000 (examples, claims) exemplifies liquid cleaning compositions comprising amine oxide, anionic surfactant, propylene glycol and octyl amine. Claim 1 differs from WO in that in claim 1 there is additionally a diamine.  
In WO (claims) the amines include diamines. Thus a skilled person would arrive at a composition according to claim 1. Thus the subject-matter of claims 1-3,5,8 is not inventive.

US-A-5356800 (claims, col.9, example) describes liquid compositions comprising amine oxide, short chain (C2-6) glycol (or alcohols), ethoxylated diamine and optionally surfactant. Claim 1 differs from US in that in claim 1 the surfactant is anionic.

The liquids of US (col. 9,1) may be used in cleaning compositions. Anionic surfactants are common ingredients in cleaning compositions. Thus a skilled person would arrive at a composition according to claim 1. Thus the subject-matter of claims 1-3,5,8 is not inventive.

**Re Item VII**

Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in the above cited documents are not mentioned in the description, nor are these documents identified therein.

**Re Item VIII**

- 1) The formula on pages 3, 6 and claim 1 is incomplete.
- 2) Amine oxides are regarded as semipolar surfactants, they are usually not regarded as amphoteric surfactants, see also present page 13. Thus claim 1 is unclear and is inconsistent with pages 13-14; amine oxide should therefore introduced into claim 1.
- 3) According to page 12 materials based on ethylene diamine are unsuitable. However these compounds seem not excluded from claims 1, 5.
- 4) It is clear from the description on page 6 that the following features are essential to the definition of the invention:  
The amount of diol is at least 0,5% and the amount of polymeric glycol is at least 0,25%.  
Since independent claim 1 does not contain these features it does not meet the requirement following from Article 6 PCT taken in combination with Rule 6.3(b) PCT that any independent claim must contain all the technical features essential to the definition of the invention.
- 4) According to page 21, lines 6-10 0,1-15% buffering agent having certain pKa values should be present which is not mentioned in claim 1.
- 5) The serial numbers on at least pages 12-13,15,18-19,21,23 should be substituted by the publication numbers.

## PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>7408/JB</b>	<b>FOR FURTHER ACTION</b> see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 b low.	
International application No. <b>PCT/US 00/ 03231</b>	International filing date (day/month/year) <b>08/02/2000</b>	(Earliest) Priority Date (day/month/year) <b>08/02/1999</b>
Applicant <b>THE PROCTER &amp; GAMBLE COMPANY et al.</b>		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 4 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

## 1. Basis of the report

- a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international search was carried out on the basis of the sequence listing:

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ Certain claims were found unsearchable (See Box I).

3. ☐ Unity of invention is lacking (see Box II).

## 4. With regard to the title,

☐ the text is approved as submitted by the applicant.

☒ the text has been established by this Authority to read as follows:

**DIOLS AND POLYMERIC GLYCOLS IN DISHWASHING DETERGENT COMPOSITIONS**

## 5. With regard to the abstract,

☐ the text is approved as submitted by the applicant.

☒ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

## 6. The figure of the drawing to be published with the abstract is Figure No.

☐ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

☒ None of the figures.

# INTERNATIONAL SEARCH REPORT

International application No.

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## B x III TEXT OF THE ABSTRACT (Continuation of Item 5 of the first sheet)

Disclosed are detergent compositions comprising organic diamines, anionic surfactants and amphoteric surfactants including amine oxide for hand dishwashing which, by incorporating certain organic solvents, results in a liquid dishwashing detergent composition that is not only a more effective cleaning agent, but also offers improved physical and enzymatic stability and more convenient rheology and handling characteristics than typical liquid dishwashing compositions.

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International Application No

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## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C11D3/30 C11D1/83 C11D1/94 C11D3/43 C11D3/20  
C11D3/37

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C11D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 98 28393 A (PROCTER & GAMBLE) 2 July 1998 (1998-07-02) page 29; claims; examples page 35 -page 36 ---	1-10
X	WO 96 12000 A (PROCTER & GAMBLE) 25 April 1996 (1996-04-25) claims; examples ---	1-3,5,9
X	US 5 356 800 A (JAQUESS PERCY A) 18 October 1994 (1994-10-18) column 9; claims; examples ---	1-3,5,8
A	EP 0 449 503 A (RICHARDSON VICKS INC) 2 October 1991 (1991-10-02) page 7; claims; examples --- -/--	1-4

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

## \* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&amp;" document member of the same patent family

Date of the actual completion of the international search

15 May 2000

Date of mailing of the international search report

23/05/2000

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>GB 2 322 380 A (ECOLAB INC)  26 August 1998 (1998-08-26)  page 13; claims</p> <p>-----</p>	1

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 00/03231

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 9828393	A	02-07-1998	US 5990065 A	23-11-1999
			AU 5379598 A	17-07-1998
			EP 0946703 A	06-10-1999
			PL 334376 A	28-02-2000
WO 9612000	A	25-04-1996	AU 1288195 A	06-05-1996
			AU 3686995 A	06-05-1996
			BR 9408622 A	16-09-1997
			BR 9509349 A	25-11-1997
			CA 2202505 A	25-04-1996
			CN 1168691 A	24-12-1997
			CZ 9701109 A	17-09-1997
			CZ 9701110 A	17-09-1997
			EP 0785978 A	30-07-1997
			EP 0833884 A	08-04-1998
			EP 0785981 A	30-07-1997
			HU 77805 A, B	28-08-1998
			HU 78084 A	30-08-1999
			JP 10507469 T	21-07-1998
			JP 10509468 T	14-09-1998
			TR 960312 A	21-06-1996
			TR 960313 A	21-06-1996
			WO 9700929 A	09-01-1997
			WO 9612004 A	25-04-1996
			US 5981466 A	09-11-1999
US 5356800	A	18-10-1994	AU 681609 B	04-09-1997
			AU 5539594 A	22-06-1994
			BR 9307700 A	31-08-1999
			CA 2150465 A	09-06-1994
			CZ 9501362 A	13-03-1996
			EP 0670894 A	13-09-1995
			FI 952610 A	13-07-1995
			JP 2908879 B	21-06-1999
			JP 8505766 T	25-06-1996
			NO 952120 A	19-07-1995
			NZ 314287 A	26-06-1998
			SK 70495 A	08-11-1995
			WO 9412623 A	09-06-1994
			ZA 9308655 A	01-08-1994
EP 0449503	A	02-10-1991	NONE	
GB 2322380	A	26-08-1998	US 5871590 A	16-02-1999
			AU 5298698 A	27-08-1998
			BR 9800701 A	01-06-1999
			CA 2230021 A	25-08-1998
			DE 19807195 A	27-08-1998
			FR 2760021 A	28-08-1998
			IT T0980141 A	24-08-1999
			JP 10237491 A	08-09-1998